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Applicants: Mats Sagfors, *et al.*

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Group Art Unit: 2617

Application No 10/501,513

Examiner: Shedrick, Charles T

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For: Method and System of Channel Resource Allocation

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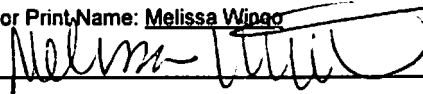
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APPEAL UNDER 35 U.S.C. §134

This Brief is submitted in connection with the decision of the Primary Examiner set forth in the Final Official Action dated February 3, 2009, and the Advisory Action dated May 5, 2009, finally rejecting claims 50-53, 55-60, 62 and 63, which are all of the pending claims in this application.

The Commissioner is hereby authorized to charge any appropriate fees under 37 C.F.R. §41.20(b)(2) that may be required by this paper, and to credit any overpayment, to Deposit Account No. 50-1379.

Real Party in Interest

The real party in interest, by assignment, is: Telefonaktiebolaget LM Ericsson (publ)
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Related Appeals and Interferences

None.

Status of Claims

Claims 1-49, 54, and 61 were previously cancelled and are not appealed. Claims 50-53, 55-60, 62 and 63 are pending in the present application, each of which are finally rejected and form the basis for this Appeal. Claims 50-53, 55-60, 62 and 63, stand rejected, under 35 U.S.C. §102(b), as being anticipated by Kamm, *et al.* (U.S. Patent No. 5,457,680). Claims 50-53, 55-60, 62 and 63, including all amendments to the claims, are attached in the Claims Appendix. The rejection of claims 50-53, 55-60, 62 and 63 is appealed.

Status of Amendments

The claims set out in the Claims Appendix include all entered amendments. No amendment has been filed subsequent to the final rejection.

Summary of Claimed Subject Matter

Claim Element	Specification Reference
50. A method of channel resource allocation in a wireless communications system, said method comprising the steps of:	Page 8, line 18, <i>et seq.</i> Page 12, line 1, <i>et seq.</i>
sniffing one or more data transmissions to or from a data provider for information within one or more application-level data packets, the information being related to application-level data object size; and	Figure 7; Page 15, line 1, <i>et seq.</i> Figure 8; Page 16, line 8, <i>et seq.</i> Figure 9; Page 16, line 16, <i>et seq.</i> Figure 10; Page 16, line 27, <i>et seq.</i> Figure 11; Page 16, line 31, <i>et seq.</i> Figure 12; Page 18, line 1, <i>et seq.</i> Figure 13; Page 18, line 11, <i>et seq.</i> Figure 14; Page 19, line 3, <i>et seq.</i>
allocating radio resources as a function of said data object size, wherein said step of allocating radio resources comprises the step of predicting a future data rate from the information related to data object size.	Figure 3; Page 9, line 6, <i>et seq.</i> Figure 4; Page 13, line 9, <i>et seq.</i> Figure 5; Page 14, line 3, <i>et seq.</i> Figure 6; Page 14, line 3, <i>et seq.</i>

Claim Element	Specification Reference
57. A system for channel resource allocation in a wireless communications system, said method comprising:	Page 8, line 18, <i>et seq.</i> Page 12, line 1, <i>et seq.</i>
means for sniffing one or more data transmissions to or from a data provider for information within one or more application-level data packets, the information being related to application-level data object size; and	Figure 7; Page 15, line 1, <i>et seq.</i> Figure 8; Page 16, line 8, <i>et seq.</i> Figure 9; Page 16, line 16, <i>et seq.</i> Figure 10; Page 16, line 27, <i>et seq.</i> Figure 11; Page 16, line 31, <i>et seq.</i> Figure 12; Page 18, line 1, <i>et seq.</i> Figure 13; Page 18, line 11, <i>et seq.</i> Figure 14; Page 19, line 3, <i>et seq.</i>
means for allocating radio resources as a function of said data object size, wherein said means for allocating radio resources comprises means for predicting a future data rate from the information related to data object size.	Figure 3; Page 9, line 6, <i>et seq.</i> Figure 4; Page 13, line 9, <i>et seq.</i> Figure 5; Page 14, line 3, <i>et seq.</i> Figure 6; Page 14, line 3, <i>et seq.</i>

The specification references listed above are provided solely to comply with the USPTO's current regulations regarding appeal briefs. The use of such references should not be interpreted to limit the scope of the claims to such references, nor to limit the scope of the claimed invention in any manner.

Grounds of Rejection to be Reviewed on Appeal

1.) Claims 50-53, 55-60, 62 and 63 stand rejected, under 35 U.S.C. §102(b), as being anticipated by Kamm, *et al.* (U.S. Patent No. 5,457,680).

Argument

1.) The Examiner has maintained the rejection of claims 50-53, 55-60, 62 and 63 as being anticipated by Kamm, *et al.* (U.S. Patent No. 5,457,680). The Applicants traverse the rejections.

Claim 50 recites:

50. A method of channel resource allocation in a wireless communications system, said method comprising the steps of:

sniffing one or more data transmissions to or from a data provider for information within one or more application-level data packets, the information being related to application-level data object size; and

allocating radio resources as a function of said data object size, wherein said step of allocating radio resources comprises the step of predicting a future data rate from the information related to data object size. (emphasis added)

The Applicants' invention is directed to allocation of channel resources in a wireless communications system. To efficiently allocate channel resources, the invention sniffs data transmissions for information related to application-level data object size. Based on such data object size, a future data rate is predicted and appropriate radio resources are allocated. Kamm fails to teach that combination of elements.

In response to the prior Office Action, the Applicants amended claim 50 to include the limitations of claim 54, which the Examiner had simply asserted was taught by the "channel assignment predictions" taught by Kamm at column 14, lines 55-61. The Applicants noted that predicting a channel assignment, however, is not the same as allocating radio resources based on a predicted future data rate, wherein the prediction is based on a detected application-level data object size.


The portion of Kamm relied upon by the Examiner only teaches that after a mobile data gateway (MDG) "has collected sufficient analog channel history, it will begin to predict future [channel] assignments." That is not what is recited in claim 50. First, "sniffing one or more data transmissions to or from a data provider for information within one or more application-level data packets, the information being related to application-level data object size" is not the same, or even analogous to, collecting "sufficient analog channel history." The closest comparison in the teachings of Kamm is to "allocating an additional channel to the mobile data radio when the forward data packet size is greater than a threshold value." Applicants' invention is not concerned with packet size, however, but information "within" application-level data packets that relate to the size of the application-level data object (such as a video or photo) that is transmitted using, as known to those skilled in the art, multiple data packets. Furthermore, there is no reference in Kamm to predicting a "future data rate" as a function of the acquired knowledge of the data object size.

It must be remembered that anticipation requires that the disclosure of a single piece of prior art reveals every element, or limitation, of a claimed invention. Furthermore, the limitations that must be met by an anticipatory reference are those set forth in each statement of function in a claims limitation, and such a limitation cannot be met by an element in a reference that performs a different function, even though it may be part of a device embodying the same general overall concept. Whereas Kamm fails to anticipate each and every limitation of claim 50, that claim is not anticipated thereby. Whereas independent claim 57 includes analogous limitations, Kamm also fails to anticipate that claim. Moreover, whereas claims 51-53 55 and 56 are dependent from claim 50, and claims 58-60, 62 and 63 are dependent from claim 57, and include the limitations of their respective base claims, those claims are also not anticipated by Kamm.

CONCLUSION

The claims currently pending in the application are patentable over Kamm and, therefore, the Applicants request that the Examiner's rejection thereof be reversed and the application be remanded for further prosecution.

Respectfully submitted,



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Date: August 3, 2009

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CLAIMS APPENDIX

1-49. (Cancelled).

50. (Previously Presented) A method of channel resource allocation in a wireless communications system, said method comprising the steps of:

sniffing one or more data transmissions to or from a data provider for information within one or more application-level data packets, the information being related to application-level data object size; and

allocating radio resources as a function of said data object size, wherein said step of allocating radio resources comprises the step of predicting a future data rate from the information related to data object size.

51. (Previously Presented) The method according to claim 50, wherein said step of allocating radio resources comprises the step of selecting one or more channel characteristics.

52. (Previously Presented) The method according to claim 50, wherein said one or more data transmissions are sniffed in an uplink direction.

53. (Previously Presented) The method according to claim 50, wherein said one or more data transmissions are sniffed in a downlink direction.

54. (Cancelled).

55. (Previously Presented) The method according to claim 51, wherein said channel characteristics are selected from the group consisting of:

data rate;

dedicated or shared usage;

scheduling;

modulation;

spreading code spreading factor; and

transmission power.

56. (Previously Presented) The method according to claim 50, wherein one or more of said application-level data packets are cached prior to being transmitted using said radio resources.

57. (Previously Presented) A system for channel resource allocation in a wireless communications system, said method comprising:

means for sniffing one or more data transmissions to or from a data provider for information within one or more application-level data packets, the information being related to application-level data object size; and

means for allocating radio resources as a function of said data object size, wherein said means for allocating radio resources comprises means for predicting a future data rate from the information related to data object size.

58. (Previously Presented) The system according to claim 57, wherein said means for allocating radio resources comprises means for selecting one or more channel characteristics.

59. (Previously Presented) The system according to claim 57, wherein said one or more data transmissions are sniffed in an uplink direction.

60. (Previously Presented) The system according to claim 57, wherein said one or more data transmissions are sniffed in a downlink direction.

61. (Cancelled).

62. (Previously Presented) The system according to claim 58, wherein said channel characteristics are selected from the group consisting of:

data rate;

dedicated or shared usage;

scheduling;
modulation;
spreading code spreading factor; and
transmission power.

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63. (Previously Presented) The system according to claim 57, wherein one or more of said application-level data packets are cached prior to being transmitted using said radio resources.

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EVIDENCE APPENDIX

None.

RELATED PROCEEDINGS APPENDIX

None.